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Ethics and health care 'underfunding'

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Abstract

There are continual "crises" in health care systems worldwide as producer and patient groups unify and decry the "underfunding" of health care. Sometimes this cacophony is the self interest of profit seeking producers and often it is advocacy of unproven therapies. Such pressure is to be expected and needs careful management by explicit rationing criteria which determine who gets access to what health care. Science and rationality, however, are unfortunately, rarely the rules of conduct in the medical market-place.

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Introduction

Throughout the world there are "rolling local crises" about "underfunding" in health care as groups in society press the case for increased expenditure. There are two certainties in life: death and scarcity. A long, good-quality life free of pain, disability and distress from birth to death is the exception rather than the rule. Most people confront morbidity over the life-cycle and demand cures and care which are expensive and often of unproven benefit. Principles and practices (mostly only implicit) determine who is left in pain and discomfort, who is treated and who is left to die. The policy issue is therefore not whether, but how, to ration access to health and social care. Society and its political representatives are, however, reluctant to confront this reality. Alan Milburn was the first secretary of state to admit publicly the existence of rationing in the National Health Service (NHS) at the National Institute for Clinical Excellence (NICE) conference in December 1999! A health service in "political denial" stunts the development of socially agreed rationing principles, that are openly discussed and accountably applied, and creates a market of special pleading on both the demand—(for example patient advocacy groups) and supply side (for example, the pharmaceutical industry). These are organisations with overlapping goals which result in a single demand: spend more!

Pressure on resources is unlikely to decrease. After all, life is a terminal sexually transmitted disease. Some social gerontologists expect that living to 120 years may become normal this century. Although there is some speculation that, instead of a slow decline to death with increased disability, the period of morbidity will become compressed, with improved quality of life for the elderly and reduced resource consequences,[1–4] the exploitation of the genome map by commerce and rising intolerance of disability amongst the population, are likely to bring with them increased pressure on health care financing. The gap between what is demanded by society and its capacity to provide health care may increase, generating further political dissonance and the search for contradictory "quick fixes" with slight, if any, evidence bases. The privatisation of the NHS (in the UK) or the introduction of national insurance (in the USA) are characteristic "panaceas".

Who claims there is underfunding of health care? What is the basis of their claims? What ethically founded rules of conduct should determine rationing?

Who claims there is underfunding?

The debate about underfunding in health care is ubiquitous and debates about the NHS are replete with assertion (rather than analysis and evidence). Provider and consumer groups regularly review the resources of the NHS, conclude it is underfunded and lobby for reform. Much of this activity is not evidence based. A group financed by Glaxo Wellcome and chaired by a former chief executive of the NHS, Sir Duncan Nichol, concluded that the service was underfunded and could be "rescued" only by extensive use of patient charges.[5] Three economists, Stoddart, Garer and Evans,[6] confronted by similar sectional interests in the Canadian policy arena in 1979 and 1994, concluded their review of user charges by saying that the proposals of such advocates were "misguided and cynical efforts to tax the ill and/or drive up the total cost of health care whilst shifting some of the burden out of government budgets". One of these authors, Evans, has gone on to argue that advocates of user charges are like zombies: however much you slay them, they return, cheerfully proposing the same misguided policy. His explanation of this behaviour is the link between the advocates and commercial interests.[7]

Poor policy advice is regularly given in the UK as well as Canada. The Adam Smith Institute[8] recently advocated user charges paid in proportion to income and up to a limit of £120 per year, with the poor paying no more than £60 per year. They argued that this "co-payment model would bring urgently needed new money into the UK health care system". Whilst the source funding for this study is unclear, its launch again involved the supply-side in the shape of pharmaceutical companies and pharmacy groups. Once again the zombie reappears, having been resuscitated by those whose

incomes stand to benefit directly from the additional £2.2 bn it was hoped would be brought into the health care system.

Another supply-side group, the British Medical Association, (BMA) has repeated a review first carried out in 1970[9] and again predictably concluded that the NHS is underfinanced. Its proposed solution is that expensive new technologies should be financed by increases in private insurance.[10] The possibility that such technologies might be of marginal cost-effectiveness, are very expensive and probably too costly to insure was not considered. In fact, on both sides of the Atlantic, the supply-side advocates of increased spending (public or private) are paradoxically at risk of not serving their members' interests, because of the indirect consequences of their proposals.

The illogicality in the BMA's conclusions highlights a nice paradox for the critics of the NHS. As Margaret Thatcher argued when introducing the "internal market" reforms in 1989, if the NHS were efficient there would be no need for the private sector. If the NHS were able to focus its resources efficiently, it would provide only services which were cost effective. Yet it is these services, epitomised by interventions such as hip replacements and cataract removals, for which there are NHS waiting lists and where NHS consultants augment their income with private practice. Such interventions are eminently insurable and are the core business of private initiatives such as the British United Provident Association (BUPA) and the Private Patients Plan (PPP). However, the BMA want these activities to be more extensively provided in the NHS, with expensive major interventions left to private insurers. It is these activities which are unlikely to be insurable. Pushed to their limit, the BMA proposals would destroy the private sector! The BMA thus seeks to advance its members' pecuniary interests by expanding the NHS. As with the Nichol report, such illogicality goes unnoticed in the pursuit of increased health care expenditure—and higher BMA members' incomes.

Such paradoxes are not unique to the UK. In the United States, the 2000 presidential race was dominated by debate about competing programmes to fund pharmaceuticals for the elderly. Medicare in the USA provides health care for the elderly but does not reimburse pharmaceuticals. "Grey power" obliged Bush and Gore to confront the issue in the face of rapidly escalating drug costs about which the elderly were protesting. Bush's proposals, though modest, may lead to considerable increases in *public* expenditure, which sits oddly with Republican ideology, and would strain considerably the relationship between the president and those in the industry who contributed so generously to his campaign. Elsewhere in the US health care system there is pressure of another kind to address alleged underfunding. The coverage of the Medicare programme is determined by eligibility for certain social security benefits. Many poor are excluded and this results in millions of children in

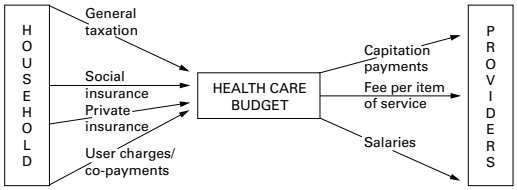

Figure 1

low income families having limited access to health care. As a consequence there is continuous lobbying and congressional debate about the case for increased public funding of this vulnerable group. But the prospect of success is remote. The continuing lament in the USA about children's access to care is a reflection of the relative powerlessness of the supporting lobbies. Extending Medicaid or introducing "Kiddie-care" would bring only modest gains to insurers and other commercial interests such as the pharmaceutical industry!

What is the basis of 'underfunding' advocacy?

Supply-side advocates understand some basic economic accounting very well. Reinhardt[11] has emphasised the implications of the income = expenditure identity in health care. Resources are owned by households, who acquire their command over resources from selling their labour (wages), and owning income-earning assets (profits, interest and rent). It is they who fund health care, and they do it through four pipelines: taxes, social insurance (another form of taxation), user charges and private insurance premium payments. (See Figure 1.) This expenditure flows through the four pipelines to become income for the supply side.

The flow of household funds down these pipelines determines the health care budgets, both private and public. Budgets are distributed to physicians (salaries, fees for service and capitation payments), hospitals and other providers such as the pharmaceutical industry. Demand-side expenditures are identically equal to the incomes of providers (net of transaction costs).

Expenditure always equals income. Whenever provider groups such as the BMA or the pharmaceutical industry support more expenditure, they are also supporting increased rewards for themselves. They will oppose single pipeline funding for the reason that it is harder to manipulate in their interests (the publicly stated reason is likely to be on grounds of freedom of choice). The impact of proposed expenditure increases on the health of the community will receive little attention—after all, that is not, for them, the main purpose of the system. Increased funding may not improve patient health and may result merely in increased affluence for providers!

Evans's discussion of zombies[7] is a sharp demonstration of how difficult it is to prevent rent-seeking behaviour. There is a consensus among most health

economists, although the evidence base is incomplete, that single pipeline funding enables effective cost control. Thus those countries which are single-pipeline financed by taxation can, by control of public expenditure limit cost inflation better than countries where funding is fragmented (for example, the USA). Once funding is fragmented, direct control of one pipeline tends to be compensated by inflation in funding via another. Thus, it is argued, provider incomes are best controlled in tax-funded systems. Whether the control is too strong requires a view about what the health care system is *for*, ie the pursuit of either the cost-effectiveness of the additional care that might be provided or the value of the expected additional outcomes for patients both actual and prospective.

The nice issue in debate thus comes down to the extent to which expenditure increases generate merely additional provider incomes or improve patient health. Macro-economic cost control needs to be supplemented by micro-economic incentives which ensure efficient resource use.

Variations in resource allocation

In all developed countries there is evidence of considerable variations in medical practice. These small area variations were highlighted by Wennberg[12] in the late 1970s when he and his colleagues found considerable differences in the volume of health care activities delivered to populations of two similar areas, New Haven and Boston, in New England. McPherson, Wennberg and colleagues identified similar differences across countries.[13] McPherson[14] explored the effects of demand- and supply-side variables on variations in Britain.

There is also evidence of considerable variations in levels of activities between practitioners and differences in mortality between hospitals. Kind described hospital variations in mortality in England in 1987.[15] More recently Jarman and colleagues have charted similar variations.[16] It is remarkable that the NHS has collected activity and mortality data for decades but not used it in management.[17]

Important conclusions to draw from this literature are that variation in activity and outcomes are ubiquitous and that policy analysts and managers in health care systems worldwide have incomplete awareness and understanding of them and generally fail to manage them efficiently. An implication of these variations is that resource allocation is inefficient. This point of view is reinforced by lack of evidence to support use of many routine interventions in health care. Cochrane[18] argued that a remedy for this ignorance was randomised controlled trials (RCTs). Whilst investment in RCTs has risen and understanding of some clinical practices has increased, the knowledge gap remains considerable.[19]

Furthermore, ignorance about how to translate evidence into practice is considerable. Thus whilst the Cochrane collaboration is gradually improving the knowledge base about "what works" in medicine, such knowledge is not applied swiftly and routinely.[19] For instance the Harvard life-saving study identified over 500 cost-effective interventions and found no relationship between cost-effectiveness and the implementation of life-saving interventions. Furthermore it was found that there was no relationship between cost-effectiveness and implementation in government regulations.[20] Decision makers, by failing to apply evidence of cost-effectiveness, ensure people die too early!

Thus whilst the cacophony of the advocates of increased spending on health care is ubiquitous, the use of existing budgets is characterised by variation and inefficiency. Practitioners and regulators adopt interventions which are demonstrably not cost-effective. In doing this they enhance the perception of underfunding and reinforce the pressure for increased expenditures (which increase their incomes!) The chronic lack of transparency in decision making and accountability for actions should, in principle, weaken the case for increased health care expenditure: why pour good money after bad! However, lack of public awareness, fear of ill health and death and the political dynamics of the health care market-place obscure the limitations of a knowledge-base and facilitate the dominance of "experts" who declare that underfunding is "the" policy problem.

The rationing debate

One way of subverting these processes is by bringing the economic paradigm to the centre of the resource allocation or rationing debate in health care. Scarcity is ubiquitous and individuals, groups and governments have to manage rationing processes. It is not a question of whether to ration but how: what principles should determine individuals' access to goods and services?

In health care, argument about the management of the difference between finite means and infinite ends or underfunding is particularly intense. Rationing of access to care determines who will live in what degree of pain and discomfort, and who will die. Williams defined rationing as occurring "when anyone is denied (or simply not offered) an intervention that everyone agrees would do them some good and which they would like to have".[21]

These two elements, "doing some good" or beneficial effect on patient health status, and "like to have" or patient preference for treatment, are central issues in the underfunding debate.

The medical paradigm in the age of the Cochrane collaboration continues to focus principally on the systematic appraisal of the evidence (with the strong preference for RCTs) of clinical effectiveness. Thus evidence of efficacy, sometimes in relation to placebo and sometimes in relation to inappropriate therapeutic comparators, determines whether a new drug is registered and given a product licence by the regulating authorities. The effect may be small, for narrow groups of patients, and detected over short trial periods where side effects are not evident. However, this is the evidence which is used to market the product and spread its use, appropriate and inappropriate, by practitioners.

What is clinically effective may not be cost-effective. But any product which is cost-effective is clinically effective! From the economic point of view, evidence of effect is insufficient to determine the use of a therapy.[22] With the health care budget finite, the attention of decision making has to be focused on the value of what is gained (the health benefit) and the value of what is given up (the opportunity cost). To get "the greatest bang for the buck", it is imperative to maximise the former and minimise the latter.

Imagine there are two therapies X and Y to treat condition A. Therapy X produces five years of good quality life (5 QALYs—Quality Adjusted Life Years). Therapy Y produces ten years of good quality life (10 QALYs). If patients, their carers and doctors were asked to choose between X and Y, they would elect for Y, which produces the greatest health benefit for the patient. But what if therapy X costs £100 and therapy Y costs £1,000? Therapy X produces one year of good quality life for £20. Therapy Y produces one year of good quality life for £100. Therapy Y produces five more QALYs at an additional cost of £900, ie the incremental cost of Y is £180.

If the total available budget for this group of patients was £500,000, investment in therapy X would produce 25,000 QALYs and investment in therapy Y would produce 5,000 QALYs. If the social goal is to maximise QALY production, therapy X is the best investment even though therapy Y gives greater clinical benefit.

However, even if data are available about the costs and benefits of interventions, their use is problematic. Often such data are ignored: medical decision makers focus on clinical effectiveness and royal college practice guidelines usually ignore economic issues. The Scottish Intercollegiate Guidelines Network (SIGN) also ignores economic issues in devising its guidelines.

Other bodies, for example NICE, offer advice which is based in part on economic data. Often this "advice" is followed slavishly even though it might not represent the best use of local resources. The work of NICE and the Australian Pharmaceutical Benefits Advisory Committee is never easy because producer lobbies can "influence" the evidence-base and strive vigorously for approval and a return on their investments. Indeed there is much debate about whether the Pharmaceutical Benefits Advisory Committee, the Australian pioneer in the use of the economic "fourth hurdle" (the requirement to demonstrate cost-effectiveness as a condition for reimbursement by Medicare), has been "captured" by the industry and "neutralised".[23]

The National Institute for Clinical Excellence was the product of a long debate[24] and, as is shown by the circumventing of the Australian Pharmaceutical Benefits Advisory Committee, life can be precarious in a world dominated by political expectations (so often over ambitious and unrealistic) and expediency. However, these bodies represent substantial developments in the application of the economic paradigm to the allocation of health care resources.

Efficiency alone is unlikely to be the sole determinant of resource allocation. Equity issues, whether they are based on social class and/or fair innings arguments, may be used to weight benefit and direct resources into activities which are demonstrably inefficient. Such weights need to be explicit and adopted as a result of social consensus.[25]

Until the principles of resource allocation or rationing are made explicit, agreed by social consensus and applied, health care delivery will exhibit variation in practice and outcome and the case for increased funding will be incomplete. Regrettably this will not inhibit providers and patients from behaving like Oliver and demanding "more". Unlike Oliver, however, who was starved and hungry, there is less evidence that providers are so deprived!

Overview

The rules of conduct (or ethics) in the medical market-place are rarely explicit. The economic perspective is clear: to maximise benefits (health improvements) from limited resources by targeting resources at those activities high in the cost-QALY league table. Whether this economic perspective should dominate depends on society's objectives, but it has a strong claim for use, probably with equity weighting, in a world of scarce resources. Its application could counter the self interest of providers, make exchange relationships transparent and oblige decision makers to be accountable in this world as well as the next! Slow movement towards this nirvana is evident but this does not still the chorus for increased expenditure to remedy often unsubstantiated claims of "underfunding".

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References

1 Fries JF. Aging, natural death, and the compression of morbidity. *New England Journal of Medicine* 1980;**303**:130-5.
2 Fries JF, Green LW, Levine S. Health promotion and the compression of morbidity. *Lancet* 1989;**8636**:481-3.
3 Manton K, Corder L, Stallard E. Chronic disability trends in elderly US populations 1982–94. *Proceedings of the National Academy of Sciences* 1997;**4**:2593-8.
4 Jacobzone S, Cambois E, Chaplain E, Robins JM. *The health of older persons in OECD countries.* OECD economics working paper, no 201. Paris: OECD, 1998.
5 Nichol D. *UK health and health care services: challenge and policy. A report by Healthcare 2000.* London: Healthcare 2000, 1995.
6 Stoddart G, Barer ML, Evans RG. *User charges, shares and delusions: another look at the literature.* Ottawa: Premier's Council on Health, Well-being and Social Justice, 1994.
7 Evans R. *Who are the zombie masters and what do they want?* Ottawa: Premier's Council on Health, Well-being and Social Justice, 1994.
8 Senior I. *Paying for medicines: time for a fundamental re-think* [report]. London: Adam Smith Institute, 2001.

9 British Medical Association. *Health science financing*. Report of a BMA advisory panel chaired by Dr I M Jones. London: British Medical Association, 1970.
10 British Medical Association. *Health care funding review*. London: British Medical Association, 2001.
11 Reinhardt M. Table manners at the health care feast. In: Yaggy D, Anglan WA, eds. *Financing health care: competition versus regulation*. Cambridge, Ma: Ballinger, 1978.
12 Wennberg JE, Freeman JL, Culp WJ. Are hospital services rational in New Haven or over-utilised in Boston? *Lancet* 1987; **8543**:1185-9.
13 McPherson K, Wennberg JE, Hovind OB, Clifford P. Small area variations in the use of common surgical procedures: an international comparison of New England, England and Norway. *New England Journal of Medicine* 1982;**307**:1310-14.
14 McPherson K. Why do variations occur? In: Andersen TF, Mooney G, eds. *The challenge of medical practice variations*. London: Macmillan, 1989.
15 Kind P. *Hospital deaths: the missing link: measuring outcome in hospital activity data*. Discussion paper 44. York: Centre for Health Economics, University of York, 1987.
16 Jarman B, Gault S, Alves B, Hider A, Dolan S, Cook A, *et al.* Exploring differences in English hospital death rates using routinely collected data. *British Medical Journal* 1999;**318**:1512-20.
17 Maynard A, Bloor K. Reforming the consultants' contract. *British Medical Journal* 2001;**322**:541-3.
18 Cochrane AL. *Effectiveness and efficiency: random reflections on health service*. London: Nuffield Provincial Hospitals Trust, 1972.
19 Maynard A, Chalmers I, eds. *Non-random reflections on health services research*: *to mark the 25th anniversary of A L Cochrane's efficiency and effectiveness.* London: BMJ Publishing, 1997.
20 Tangs T. Dying too soon: how cost effectiveness analysis can save lives. In: Jones L, ed. *Safe enough?: managing risk and regulation*. Canada: Fraser Institute, 2000.
21 Williams A. Personal communication, quoted in Maynard A, Bloor K. *Our certain fate: rationing in health care*. London: Office of Health Economics, 1998.
22 Maynard A , Bloor K. Regulating the pharmaceutical industry. *British Medical Journal* 1997;**315**:200-1. *British Medical Journal* 1998;**316**:226. All the letters on this page were on the topic of regulating the pharmaceutical industry. Letters were from: Furniss J, Zammit-Lucia J, Johnson N, Reed P, Towse A, Rowlett P, Clear PR, Mandel Grobler M, Lance SP, Maynard A and Bloor K.
23 Zinn C. Fury as Australia appoints former industry lobbyist to drugs watchdog. *British Medical Journal* 2001;**322**:383.
24 Maynard A. Evidence-based medicine: an incomplete method for informing treatment choices. *Lancet* 1997;**349**:126-8.
25 Maynard A, Bloor K. *Our certain fate: rationing in health care*. London: Office of Health Economics, 1998.